AMENDMENTS TO THE CLAIMS:

Replace the claims with the following rewritten listing:

1. – 26. (Cancelled)

27. (New) Apparatus for monitoring muscle activity, said apparatus comprising

means for providing signals indicative of muscle activity,

means for processing of said signals in order to detect a particular undesired activity,

means for providing a biofeedback signal,

wherein

said apparatus is designed in order to be operated in a set-up mode and a use-mode,

said apparatus is designed to be individually adaptable in said set-up mode, wherein a normally occurring muscle activity and an essentially maximal muscle activity is registered, and wherein

said means for processing of said signals in order to detect a particular undesired activity is adapted to perform an evaluation based on frequency and amplitude of the signals registered in said use-mode compared with corresponding values registered in said set-up mode.

28. (New) Apparatus according to claim 27, wherein said means for processing of said signals in order to detect a particular activity comprises means for performing a FFT (Fast Fourier Transform) analysis.

29. (New) Apparatus according to claim 27, wherein said apparatus is adapted to register a reference amplitude value corresponding to a percentage of said essentially maximal muscle activity registered in said set-up mode, said reference amplitude value being used for said evaluation.

30. (New) Apparatus according to claim 27, wherein said means for processing of said signals in order to detect a particular undesired activity is further adapted to perform an evaluation based on an area calculation of the signals registered in said use-mode, based on a signal continuously exceeding a predefined value such as said reference amplitude value.

31. (New) Apparatus according to claim 27, wherein said essentially maximal muscle activity is a maximal jaw clenching activity.

32. (New) Apparatus according to claim 27, wherein said apparatus is designed for sensing and registering muscle activity during one or more predefined normally occurring muscle activities.

33. (New) Apparatus according to claim 27, wherein said apparatus comprises means for registering and storing muscle activity during a time interval.

34. (New) Apparatus according to claim 27, wherein said apparatus is designed to be individually adaptable by having means for adjusting said feedback signal.

35. (New) Apparatus according to claim 27, wherein said means for processing of said signals in order to detect a particular activity comprises means for pattern recognition.

36. (New) Apparatus according to claim 27, wherein said means for providing signals indicative of muscle activity comprises one or more electrodes for sensing of EMG-signals.

37. (New) Apparatus according to claim 27, wherein said means for providing signals indicative of muscle activity comprises one or more electrodes for sensing of EEG-signals.

38. (New) Apparatus according to claim 36, further comprising means for testing said electrodes and a connectivity thereof to the user by supplying a test voltage to the electrode(s) measuring resulting current and comparing the resulting current with reference value(s).

39. (New) Apparatus according to claim 27, wherein said means for providing signals indicative of muscle activity comprises a microphone, a sensor for sensing of vibrations and/or other sensor means.

40. (New) Apparatus according to claim 27, wherein said apparatus comprises means for storing data corresponding to measured and/or processed signals.

41. (New) Apparatus according to claim 40, wherein the apparatus comprises means for transferring stored data to a computer.

42. (New) Apparatus according to claim 27, wherein in said set-up mode individual reference signals, signals corresponding to specific individual muscle activities and individual bio-feedback signal characteristics may be set-up, and in said user mode the apparatus may monitor muscle activity and provide bio-feedback in accordance with predefined rules and settings.

43. (New) Apparatus according to claim 27, wherein the apparatus comprises a user module for wearing on the head, on the forehead, on or in the ear.

44. (New) Apparatus according to claim 27, wherein the apparatus comprises a slave module and a master module, said slave module being designed for wearing by a human being.

45. (New) Apparatus according to claim 44, wherein said apparatus comprises charging means, for said user module or for said slave module.

46. (New) Apparatus according to claim 43, wherein said apparatus comprises means for indicating operating steps to a user comprising visual means, or acoustic means.

47. (New) Apparatus according to claim 43, wherein said apparatus comprises display means for displaying instructions and/or results stemming from a monitoring session.

48. (New) Method of monitoring muscle activity, said method comprising:

providing signals indicative of muscle activity, registering reference signals corresponding to a normally occurring muscle activity and an essentially maximal muscle activity in a set-up step,

processing signals indicative of muscle activity in a use step in order to detect a particular undesired activity, said processing of said signals taking into consideration specific individual parameters and/or references including frequency and amplitude of the reference signals registered in said set-up step, and

providing a feedback signal in case a particular undesired activity has been detected.

49. (New) Method according to claim 48, wherein said feedback is provided on a basis of an evaluation comprising a maximum force calculation, an area calculation and/or a pattern recognition process on a basis of a FFT-processing (Fast Fourier Transform).

50. (New) Method of setting up an apparatus according to claim 27, comprising:

an essentially maximal muscle activity is performed and a corresponding muscle activity signal is sensed and registered as regards frequency and amplitude,

one or more predefined muscle activities is/are performed, and a corresponding muscle activity signal is sensed and registered as regards frequency and amplitude, and

a threshold value for outputting of a feedback-signal is adjusted.

51. (New) Method of setting up an apparatus according to claim 27, comprising:

using the apparatus in a set-up mode, whereby values and/or parameters corresponding to individual muscle activities are registered and possibly stored for one or more periods of time, and

whereby said registered and/or stored values and/or parameters are utilized for providing individual reference values for normal use of the apparatus.